

Amendments to the Specification:

Please replace the paragraph beginning at page 7, line 4, with the following rewritten paragraph:

--Growth conditions of the CVD or plasma-enhanced CVD process are chosen for preferentially growing carbon nanotubes 14 having a semiconducting electronic electronic structure or molecular structure. Alternatively, carbon nanotubes 14 having a semiconducting molecular structure may be preferentially selected from among a random collection of as-grown nanotubes 14 including both metallic and semiconducting molecular structures by, for example, applying a current sufficiently high to destroy nanotubes 14 having the metallic (e.g., conducting) molecular structure. Post-synthesis destruction of conducting carbon nanotubes is described in commonly-assigned U.S. Patent Number 6,423,583, which is hereby incorporated by reference herein in its entirety. The invention also contemplates that nanotubes 14 may be composed of a material other than carbon characterized by a band gap and semiconductor properties.--